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TITLE: Method and device for precise contact free measurement of loading on a rotating spindle for machine tool monitoring uses a distance sensor and measures and records unevenness with the tool operating in an unloaded state

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
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ABSTRACTED-PUB-NO: DE 10029965A

BASIC-ABSTRACT:

NOVELTY - Method and device for monitoring rotating tools (1) using a distance sensor (2) for measuring changes in the axle or rotating part's position when under load. The first stage of the method consists of producing a signal curve for the tool with no load applied.

DETAILED DESCRIPTION - When tool rotation is then measured with a load applied the effect of any inherent roughness or out of balance effects can be compensated, so that any change of position is due entirely to loading of the tool.

USE - Measuring of the change in position of a tool, such as a drill, when it is placed under load.

ADVANTAGE - Effects of any inherent roughness or imbalance in the axle, drill, tool, etc. can be compensated for so that any changes in position are due purely to the applied load. Hence loading of the tool is more accurately measured.

DESCRIPTION OF DRAWING(S) - Figure shows a section through a drilling tool.

bit 1

distance sensor 2

axle. 3